CLAIMS

What Is Claimed Is:

1. In a spectral ellipsometer having a source of multi-wavelength light, an optical system for directing the light, and a detecting optical system for receiving light after contact with a sample surface, the improvement comprising:

an optical element for receiving the multi-wavelength light directed from the optical system and focusing the multiple wavelength light onto a single spot on the sample surface.

2. The spectral ellipsometer of Claim 1 wherein the optical element is a spherical prism.

3. The spectral ellipsometer of Claim 1 wherein the optical element is a polarizing prism with at least one curved surface for transmitting the multi-wavelength light.

4. In a spectral ellipsometer, which includes a light incidence optical system for achieving spot incidence of polarization light of multi-wavelengths onto a sample surface and a detecting optical system for outputting information concerning the sample surface based on an amount of change in elliptical polarization reflected by the sample surface, the improvement comprising a prism polarizer employed in the light incidence optical system with a curved light-incident surface and a curved light-outgoing surface that is orthogonal with respect to a progressing direction of the respective direction of incident and outgoing light.

5. A method of optically determining the characteristics of a sample surface, comprising:

providing a multi-wavelength light;

polarizing the multi-wavelength light;

directing the polarized multi-wavelength light to focus at an oblique angle on a single point on a sample surface;

measuring the reflected polarized light from the sample surface, and

determining the characterization from the change in polarization determined in the measured light.

6. The method of Claim 5, wherein the directing step includes a spherical prism polarization.

7. The method of Claim 6, wherein the polarizing prism has an incident convex surface and an exiting concave surface.